



FEMA

Disaster Summary
Chemical Leak – Charleston, West Virginia
Sunday, January 12, 2014 (5:30 am EST)
Updates in Blue

Update 5

Water Quality/Sampling Update:

- The CDC Agency for Toxic Substances and Disease Registry (ATSDR) is approving the protocols for sampling and analysis of MCHM (4-methylcyclohexane methanol). In addition, the agency will provide documentation on how they arrived at the figure of 1.0 parts per million (ppm) as the point where there are no adverse health effects.
- An investigative team from the U.S. Chemical Safety Board (CSB) is deploying to the scene to find the cause of the leak and to ensure that safeguards are in place to prevent a similar incident from occurring.
- The State testing strategy is to continually test outflow of the water plant and seek to observe 24 consecutive hours of readings below 1.0 ppm.
 - Key points in the 1,700 mile pipeline system are also being tested to ensure the preponderance of the readings are at or below the 1.0 ppm level. If both these readings are achieved, a systematic plan to purge lines and bring elements of the water system back on line will be announced.
 - Written guidance will be provided to water customers on how to purge their household plumbing and appliances. Even at 1.0 ppm the water will have a detectable odor, since there is a detection agent in the chemical.
- Remediation at the spill site is ongoing with significant progress yesterday. EPA is at the spill site advising the State on containment, remediation and soil monitoring.

Commodities Update:

Region III RRCC, FSA, and NRCC ESF 7 representatives coordinated delivery of commodities. As of 2:30 am EST, January 12:

- WV initially requested 1.4 million liters of water
 - 1,487,544 liters of water have been received by FSA Charleston and issued to the State
- WV requested 100,000 meals
 - 133,696 meals have been received by FSA Charleston and issued to the State
- WV requested 800,000 liters of water per day for January 11, 12 and 13
 - 372,010 liters have been received by FSA Charleston and 400,670 liters are en route for January 11 request
 - A total of 1.6 million liters of water are ordered for January 12 request
 - A total of 1.2 million liters of water are ordered for January 13 request

Additional Updates/Impacts:

Impacts:

- No confirmed reports of fatalities; 122 patients have been treated and released (in 10 hospitals in impacted area) while 5 were admitted
- WV Poison Control Center received 791 human exposure calls
- A “Do Not Use Water” order has been issued informing approximately 300,000 customers to not use the water for drinking, bathing, cooking or washing. It can be used for toilets and firefighting.

FEMA Headquarters:

- NRCC is activated to Level III with ESF-7; NWC is at Watch/Steady State (24/7)
- FEMA Logistics coordinating water and meal support needs with Region III Logistics
- Declaration Activity:

- Emergency Declaration FEMA-3366-EM-WV was approved on January 10, for 8 counties (Boone, Clay, Jackson, Kanawha, Lincoln, Logan, Putnam and Roane)
- Amendment 1 - Added Cabell County for emergency protective measures (Category B), limited to direct federal assistance, under the Public Assistance program on January 10, 2014.

FEMA Region III:

- RRCC is activated to Level II with ESFs 3, 5, 8, 10 and DCE; RWC remains at Watch/Steady State
- IMAT and LNO deployed to West Virginia

West Virginia:

- WV EOC remains at Level I (Full Activation)
- Governor declared state of emergency for 9 counties
- WV Water Authority and the WV State Department of Environmental Protection are investigating
- WV State Health Operations Center
 - Screened all hospitals, long term care facilities and dialysis centers; no unmet needs
 - All hospitals are on emergency water supplies with their tanks being filled from mobile tankers

Update 4

WATER Quality/Sampling Update:

An interagency group consisting of the West Virginia Bureau for Public Health, West Virginia American Water (WVAM), Army National Guard Civil Services Team, West Virginia Department of Environmental Protection (WVDEP) and other subject matter experts is working together to make decisions regarding water quality. The U.S. Center for Disease Controls (CDC) and U.S. Environmental Protection Agency (EPA) indicate that drinking water is protective of public health at a MCHM (4-Methylcyclohexane Methanol) level at or below one part per million (1 ppm). These agencies do not anticipate any health effects below this level. Four laboratories have been set up with the standards and methods to measure MCHM levels in a uniform manner.

The Kanawha Valley Water Treatment Plant must consistently produce water samples indicating results at or below this level before the current “do not use” order is lifted. At this time, there are an inadequate number of sampling results to report. Even when water produced by the plant meets acceptable health levels, extensive testing must be conducted in the distribution system before the “do not use” order is lifted. An interagency water sample collecting and testing procedure has been established and communicated to all agencies involved. The agencies involved are coordinating this procedure and working to reach consensus on a plan for systematic flushing, based on hydraulic modeling of the Kanawha Valley water distribution system.

Concentric flushing may take from several days to several weeks. The timeline may vary based on geographic location, customer demand and other factors that impact water usage and availability. The Kanawha Valley water system is the largest and most complex water system in the state, with over 100 water storage tanks and more than 1,700 miles of pipeline. (*FEMA Region III Update #8*)

WVAM has increased activated carbon and other chemicals to help oxidize the water supply. (*FEMA Region III Update #7*)

The EPA was able to conduct only limited air sampling this afternoon, due to heavy rains. Slightly lower levels were detected; this is attributed to high winds today. ESF 8 continues coordination with WV Health and are tracking healthcare facility and population impacts. No unmet needs reported. (*FEMA Region III ESF 8 report*)

Commodities Update:

Region III RRCC, FSA, and NRCC ESF 7 representatives coordinated delivery of commodities. As of 6:00 pm EST, January 12:

- WV initially requested 1.4 million liters of water
 - 1,260,654 liters of water have been received by FSA Charleston and issued to the State
 - An additional 226,890 liters of water are expected to arrive at FSA Charleston by this evening to close out the initial order of 1,487,544 million liters
- WV requested 100,000 meals
 - 133,696 meals have been received by FSA Charleston and issued to the State
- WV requested an additional 800,000 liters of water per day for today, tomorrow and Monday
 - 493,602 liters have been received by FSA Charleston and 306,398 liters are in process for today's request
 - A total of 1.6 million liters of water are ordered for tomorrow, January 12
 - A total of 1.2 million liters of water are ordered for Monday, January 13

Private Sector Partners continue to coordinate additional resources.

Additional Updates/Impacts:

Media/open sources have reported that several hundred residents have called the West Virginia Poison Control Center reporting symptoms related to the chemical spill. There have been no reports of unmet needs or requests related to hospitals in the area, and no confirmed reports of fatalities or injuries associated with this spill. ESF 8 confirmed that the WV Poison Control Center received 791 human exposure calls. There are twenty nursing homes and long term care facilities in the area, of which two reports that they have 1.5 days of water and one report they only have one day of water left. ESF 3 partners are coordinating to ensure that medical facilities are included in the WV National Guard distribution plan. Hospitals in the area have not reported any unmet needs and have 2-3 days of water on hand. *(HHS/ESF 3 Update #7)*

Update 3

ASTR/CDC continues to work with the State to determine safe levels of the chemical. EPA continues to work with ATSDR to characterize the chemical properties and to determine any potential mitigation efforts. *(Region III EPA LNO, FEMA Region III Sitrep #5)*

The initial boom placed by Freedom Industries was absorbent boom that was laying on top of the ice that lines the shore of the river. Currently the boom is under the ice and as the ice breaks, it releases more of the chemical into the river. Freedom Industries then deployed hard boom into the river at the direction of the State Department of Environmental Protection (DEP). EPA contractors conducted air monitoring at the request of the State DEP. No readings were noted on the photoionization detector but on the flame ionization detector some readings were detected at 500 feet off the property. *(ESF-10, FEMA Region III Sitrep #5)*

Location of trucks delivering water and meals as of 5:00 am EST, January 11:

- 51 trucks (894,504 liters) of water have been delivered to FSA Yeager and turned over to WV
- 4 truck (approximately 72,000 liters) of water are en route to FSA Yeager
- 20 trucks (approximately 360,000 liters) of water are to begin loading from the Cumberland and Frederick DCs at 7:30 am EST today, January 11
- 800,000 liters of water will begin loading at 7:30 am EST, January 12; trucks are currently being booked
- 5 trucks (approximately 100,000) of meals have been delivered to FSA Yeager (this completes the request for meals)
- Working to ship a total of 1.4 million liters of water and 100,000 meals *(FEMA Logistics)*
- The 100,000 meals requested by the state are only for precautionary measures; there is no feeding mission *(FEMA HQ and FEMA Region III Mass Care)*

Update 2

The EPA has an ESF 10 rep at the Region III RRCC and there is an on-scene coordinator at the plant coordinating with the Department of Environmental Protection (DEP). There have not been any requests from the State for EPA assistance; however the EPA is coordinating with the State and CDC. The chemical has been detected as far as 10 miles downstream at 3ppm. The last sample reported was at 1.7ppm and declining. There has not been a confirmation on what is a safe level, testing and inspections are ongoing. EPA, CDC, WV State Health, WVAW, DEP, National Guard, and DuPont are all coordinating on water sampling and testing. (*FEMA Region III Update #4/, EPA Region III Rep*). A Federal Staging Area (FSA) is being established at Yeager Airfield in Charleston, WV; FEMA HQ Logistics is coordinating the delivery of 1.4 million liters of water and 100,000 meals to the FSA. Deliveries have been delayed due to weather impacts, estimated delivery by tomorrow morning. (*FEMA HQ LMD*) USACE resources have been identified and are on alert if needed; no requests/missions at this time. (*Region III ESF 3 update*). The WV VOAD is setting up a warehouse at the Salvation Army in Charleston as a donations collections site; a number of corporate water donations have been made, a shower trailer donation was offered, and the Catholic Charities of West Virginia is providing a “text-to-give” service called the “West Virginia Chemical Relief Disaster Fund” for cash donations. (*FEMA Region III Update #4*). Private Sector companies including K-Mart, Wal-Mart and Target are coordinating with local resources. (*FEMA Region III Update #4*)

During press conferences today, the Facility owner stated they noticed the potential leak as early as 10:30 am, EST, January 9; however the amount of released chemical remains at approximately 5,000 gallons per the DEP and West Virginia American Water (WVAW) statements/estimates. DEP representatives stated that Freedom Industries is working to clean up the spill at the facility and in the river.

Update 1

As per FEMA Region III RA, the water treatment plant has not been shut down and remains pressurized. A do not use order has been issued informing customers to not use the water for drinking, bathing, cooking or washing. Boiling will not get rid of the chemical. It can be used for toilets and firefighting. Potential impacts for shutting down the water plant would be 100,000 customers, which equates to roughly 300,000 people. There are no current plans to shut down the plant, water testing both inside and outside the facility are ongoing. The local hospitals have a 2-3 day water supply available on hand. While residents have been checking in at local hospitals the patient load is reported to be within existing hospital capacities. HHS reports ESF 8 personnel are deploying to support all hazards public health consultation and public health information. Coordination is ongoing to establish a Federal Staging Area at Yeager Airport in Charleston, WV. FEMA HQ Logistics is working with FEMA Region III Logistics to coordinate the actual amount of water requested. As of now, estimate roughly 1.4 million liters of water to be sourced from FEMA Distribution Centers and transported to WV today. ESF 3, US Army Corps of Engineers National Water Team is on standby if needed. Approximately 5,000 gallons of the chemical are estimated to have been released. Schools in 7 of the affected counties will be closed today.

Current Situation

On January 9, 2014, at approximately 5:00 pm EST, Freedom Industries, a chemical plant in Charleston, West Virginia (population 51,000), reported a leak in the facility’s secondary containment into the Elk River. The chemical leaked, 4-methylcyclohexane methanol is a flammable solvent used in the coal preparation process. The chemical is an irritant for the eyes, respiratory system and skin. It is not clear how much of the chemical has leaked into the river.

The leak was upstream from the water intake at the Kanawha Valley Water Intake Plant. West Virginia-American Water, a water utility company downstream from the leak, may need to shutdown their plant to avoid contaminated water entering intake valves. The potential impact of a shutdown could affect 100,000 customers in Kanawha, Boone and Putnam counties. Freedom Industries is working to clean up the spill at the facility and in the river. The leak was contained as of 8:40 p.m. EST, January 9.

Impacts

- American Water produces 30-40 million gallons a day; officials are not shutting down the plant.
- Residents have been urged to remain indoors but a shelter-in-place order has not been issued.
- Residents of 8 counties (Kanawha, Boone, Putnam, Lincoln, Logan, Clay, Roane and Jackson) have been advised to not use water except to flush toilets and for fire protection.
- WV Department of Health estimated a maximum of 5,000 gallons was released, the CDC says less than 1 ppm is a safe level in a water supply and early estimates are .005 ppm; water testing is ongoing. (HHS, FEMA Region III)

FEMA Headquarters

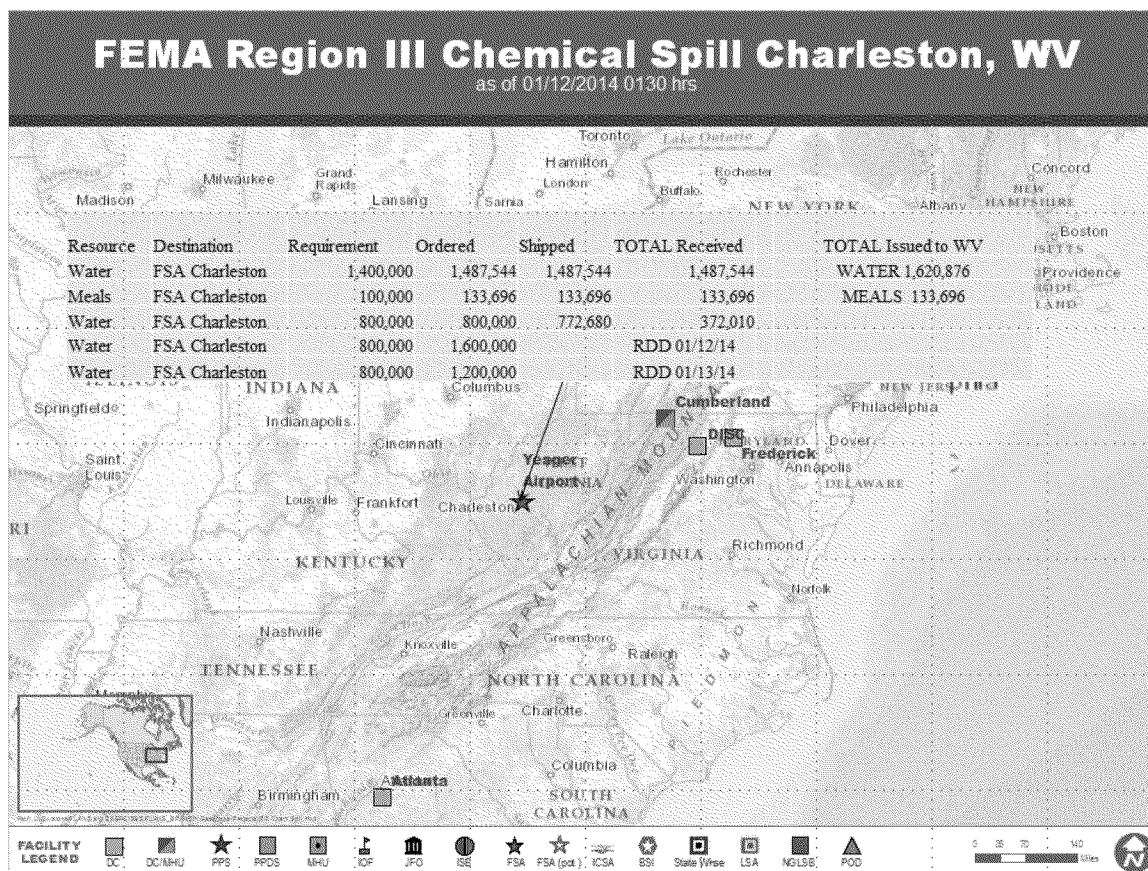
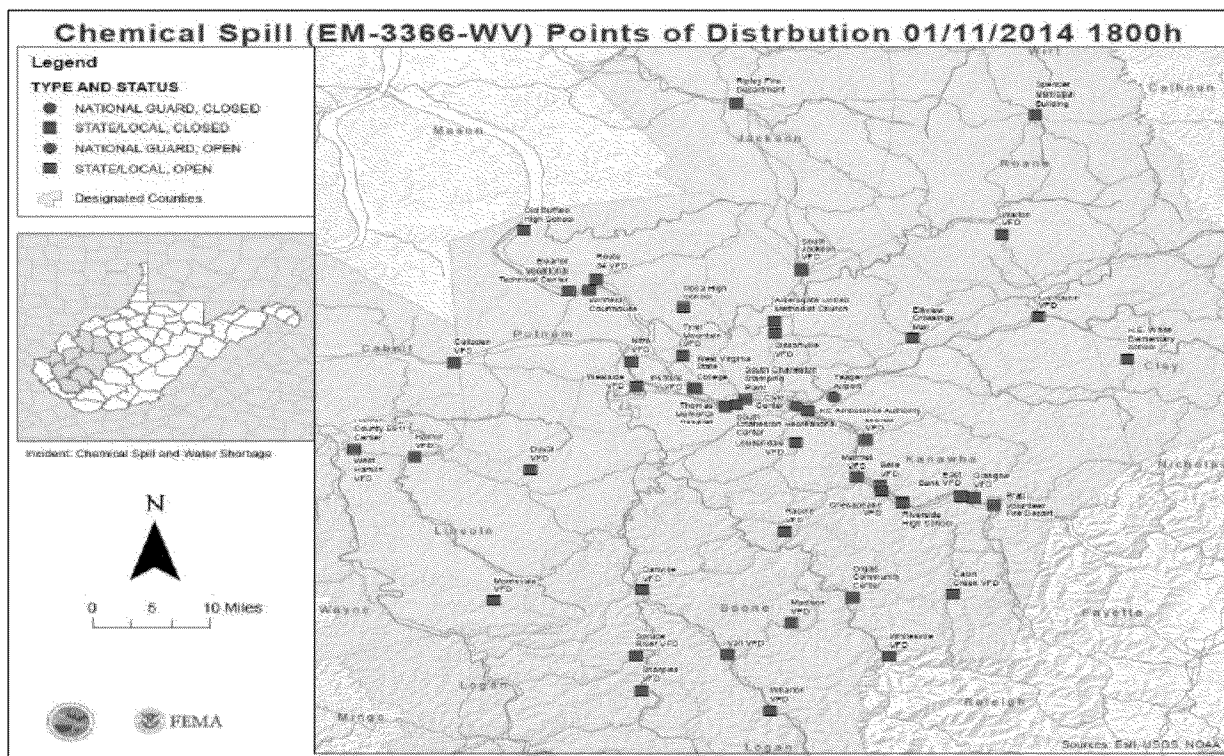
- NRCC activated to Level III with ESF-7, as of 7:00 pm EST, January 10
- National Watch Center (NWC) is at Watch/Steady State (24/7) and will continue to monitor/report
- FEMA Logistics coordinating water and meal support needs with Region III Logistics
- Emergency Declaration FEMA-3366-EM-WV was approved on January 10, for 8 counties (Boone, Clay, Jackson, Kanawha, Lincoln, Logan, Putnam and Roane) for emergency protective measures (Category B), limited to direct federal assistance under the Public Assistance program at 75 percent federal funding; the FCO is Michael J. Lapinski
- Amendment No. 1 to FEMA-3366-EM-WV was approved January 10 and adds Cabell County to the Emergency Declaration

FEMA Region III

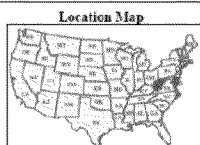
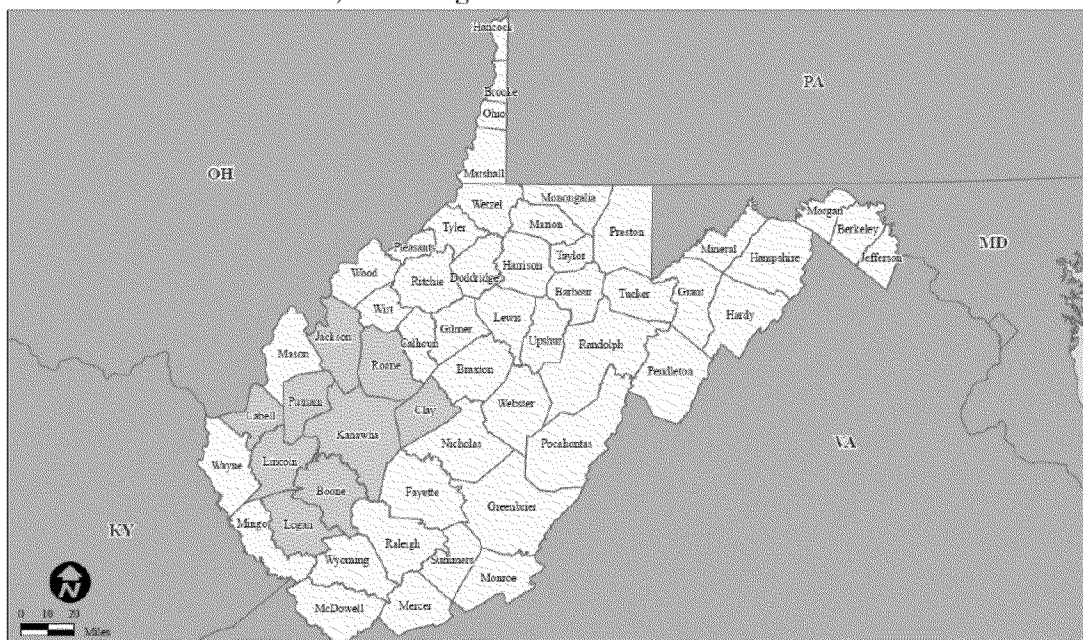
- RRCC is activated to Level II with ESFs 3, 5, 8, 10 and DCE; RWC remains at Watch/Steady State
- Region III IMAT and LNO deployed to West Virginia

West Virginia

- Governor declared a state of emergency for 9 counties (Boone, Cabell, Clay, Jackson, Kanawha, Lincoln, Logan, Putnam and Roane)
- State EOC is at Level I, Full Activation
- The State Health Operations Center was activated and an EAS alert was issued for a do not use or consume water notice.
- The West Virginia Water Authority and the West Virginia State Department of Environmental Protection are investigating.



FEMA-3366-EM, West Virginia Disaster Declaration as of 01/10/2014



Designated Counties	
	No Designation
	Public Assistance (Category B)

This assistance is for the counties of Boone, Clay, Jackson, Kanawha, Lincoln, Logan, Putnam, and Roane.



MSB-OCIO-AEES
Emergency Geospatial
Information Services (EGIS)

01/10/14 - 0:40 AM EST

Source: Disaster Federal Registry Notice
Amendment No. 1: 01/10/14